

ABSTRACT OF THE DISCLOSURE

An apparatus and method are provided for high intensity acoustic test cells that employ the Helmholtz resonator principle, incorporating at least one moderately-sized volume or test cell that is tunable to a given infrasonic to low-sonic frequency and generates sound of high intensity with very pure sinusoidal waveforms in this test cell or volume, by varying the geometry of a port which is connected to the test volume and open to either atmosphere or a second or input volume and by introducing to the test volume or the input volume a driving acoustic signal at the given tuned frequency. The apparatus and method are used for testing or performing experiments on materials, structures, devices, products, biological entities or humans at high acoustic intensities and frequencies in the low-sonic to infrasonic ranges.